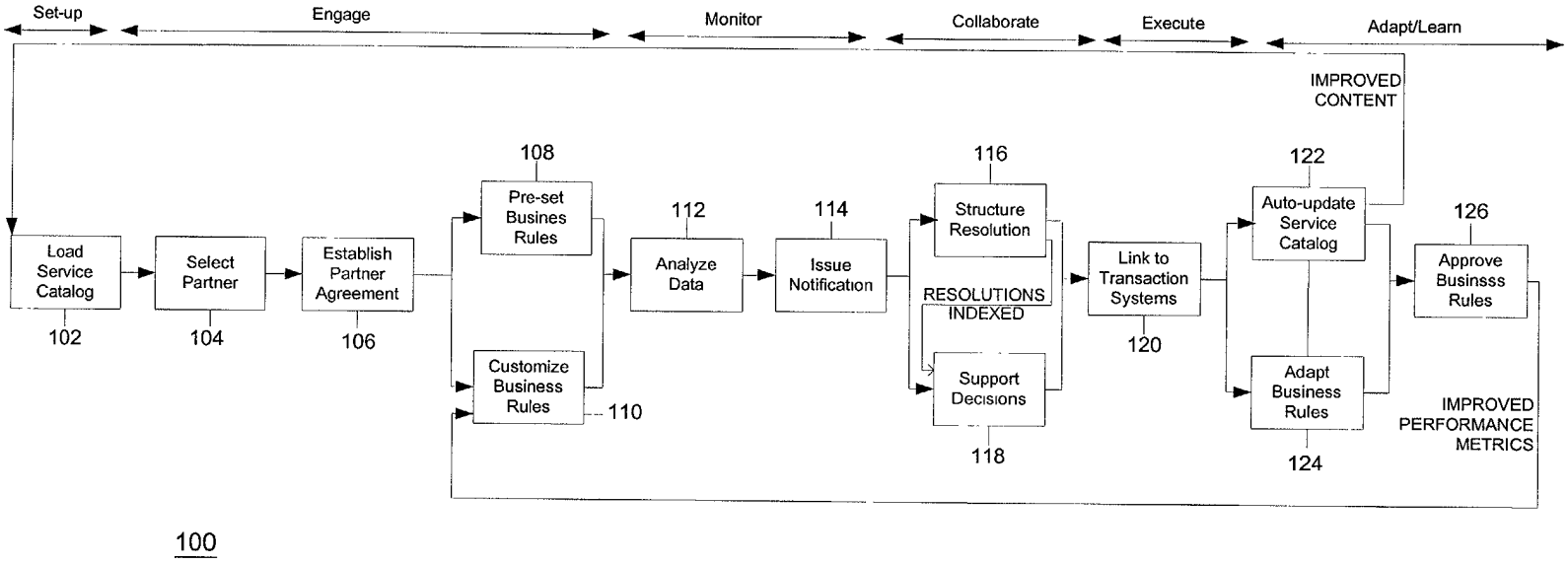

Set-up
Engage
Monitor
Collaborate
Execute
Adapt/Learn
IMPROVED CONTENT
Load Service Catalog
102
Select Partner
104
Establish Partner Agreement
106
108
Pre-set Busines Rules
Customize Business Rules
110
112
Analyze Data
114
Issue Notification
116
Structure Resolution
RESOLUTIONS INDEXED
Support Decisions
118
Link to Transaction Systems
120
122
Auto-update Service Catalog
Adapt Business Rules
124
126
Approve Businsss Rules
IMPROVED PERFORMANCE METRICS
100

Figure 1

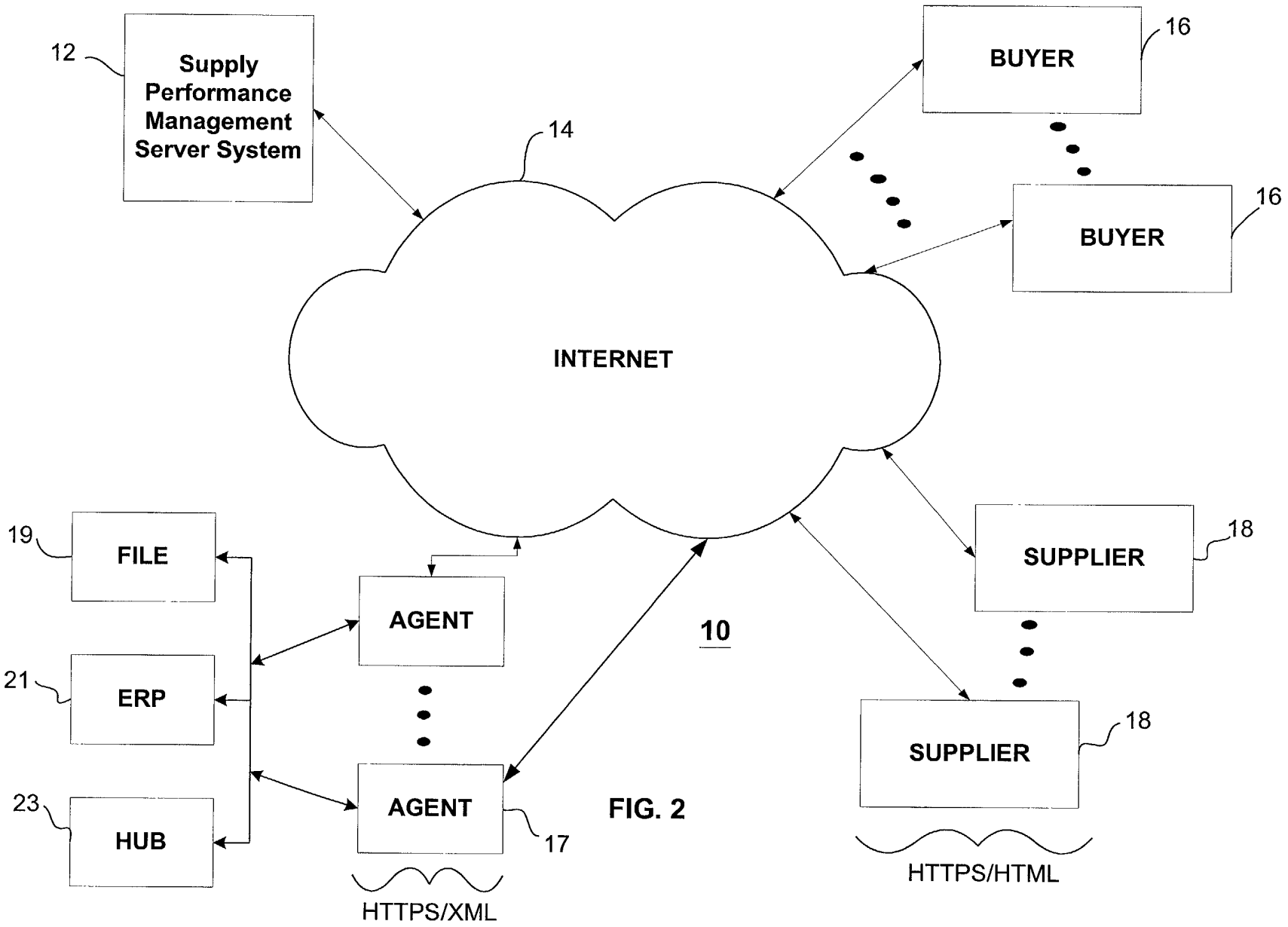

12
Supply Performance Management Server System
14
INTERNET
BUYER
16
BUYER
16
19
FILE
21
ERP
23
HUB
AGENT
AGENT
17
HTTPS/XML
10
SUPPLIER
18
SUPPLIER
18
HTTPS/HTML

FIG. 2

Patent Application Publication

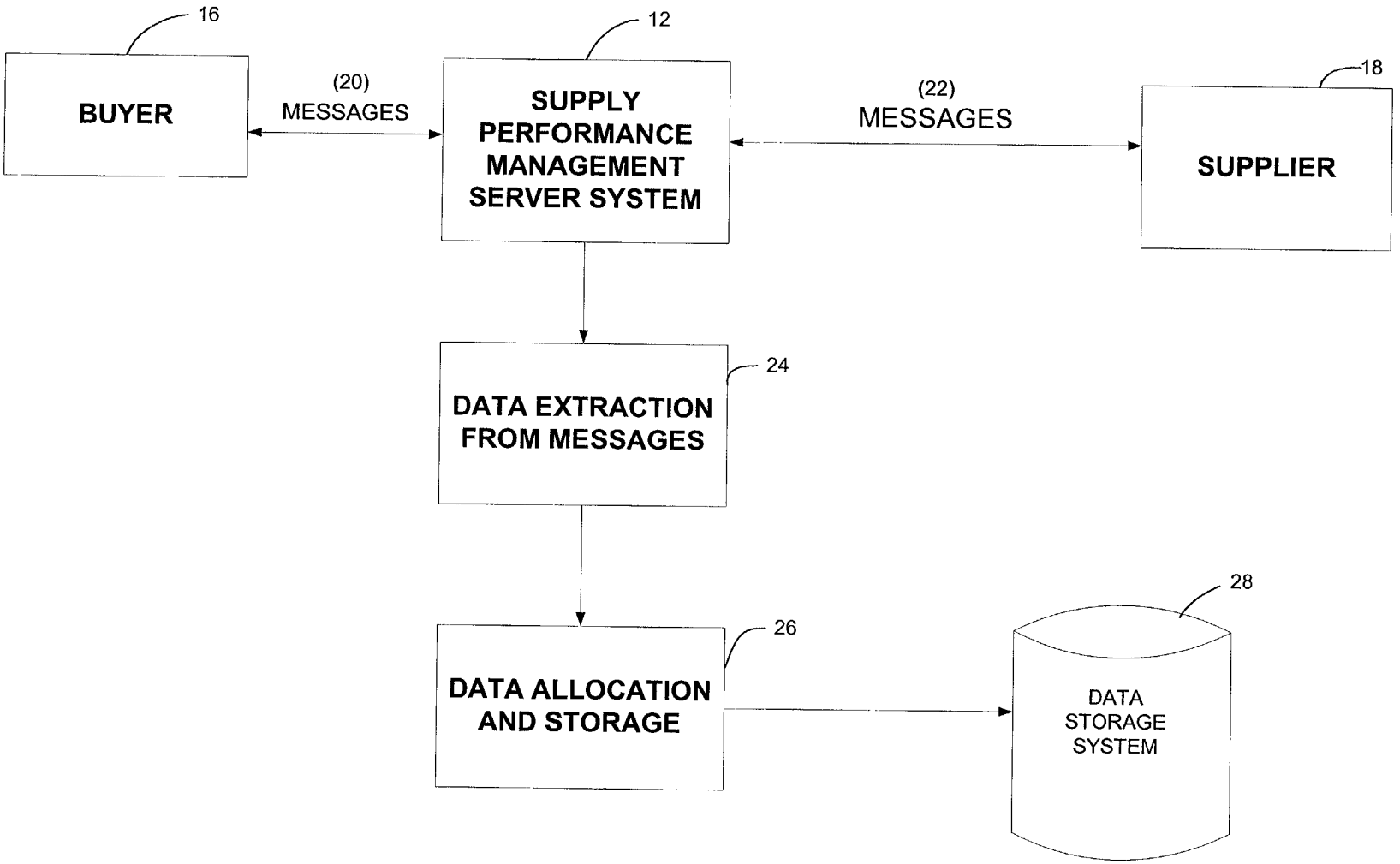



Fig. 3

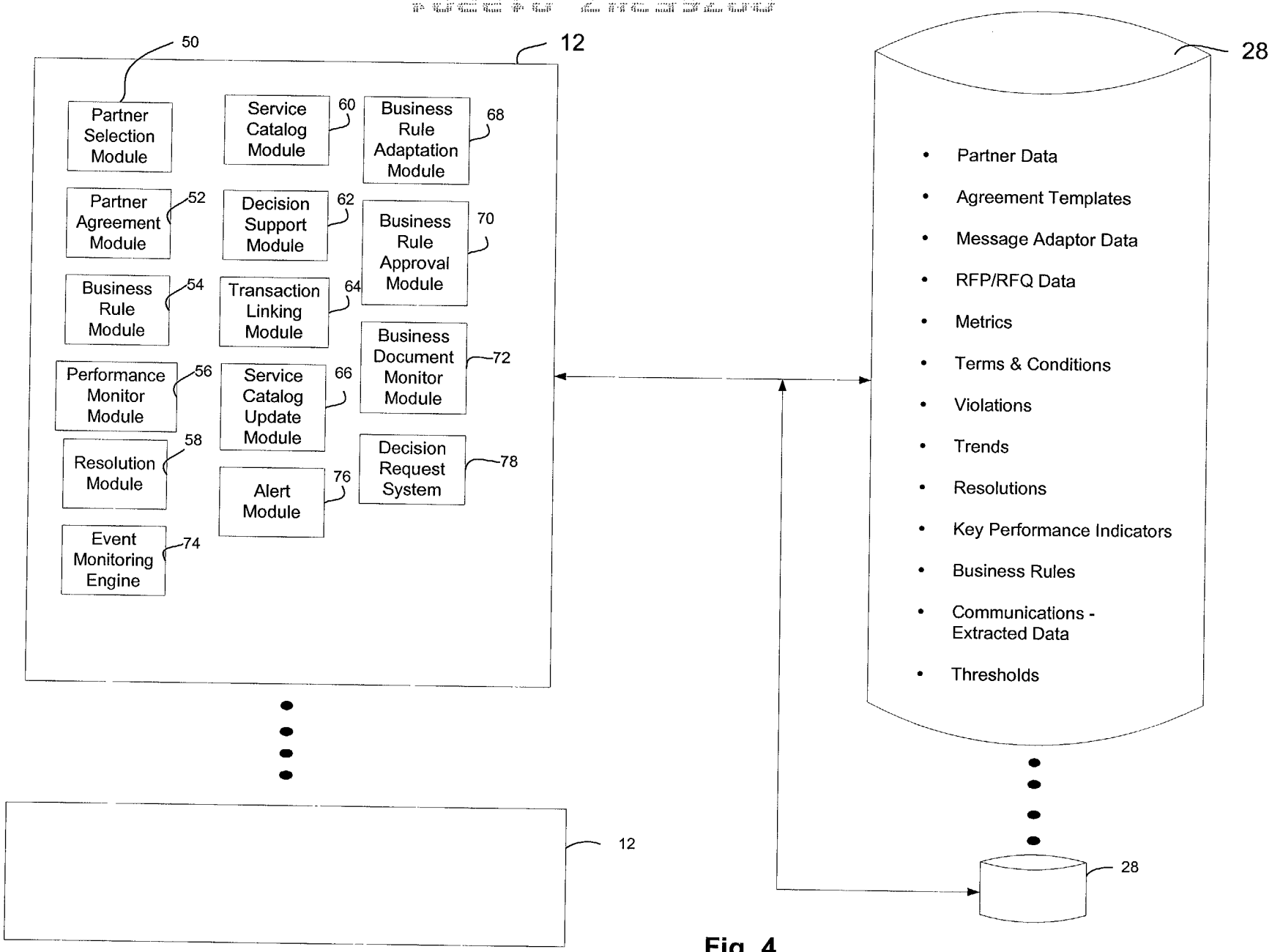

50
12
Partner Selection Module
Service Catalog Module
60
Business Rule Adaptation Module
68
Partner Agreement Module
52
Decision Support Module
62
Business Rule Approval Module
70
Business Rule Module
54
Transaction Linking Module
64
Business Document Monitor Module
72
Performance Monitor Module
56
Service Catalog Update Module
66
Resolution Module
58
Decision Request System
78
Alert Module
76
Event Monitoring Engine
74
12
28
Partner Data
Agreement Templates
Message Adaptor Data
RFP/RFQ Data
Metrics
Terms & Conditions
Violations
Trends
Resolutions
Key Performance Indicators
Business Rules
Communications - Extracted Data
Thresholds
28

Fig. 4

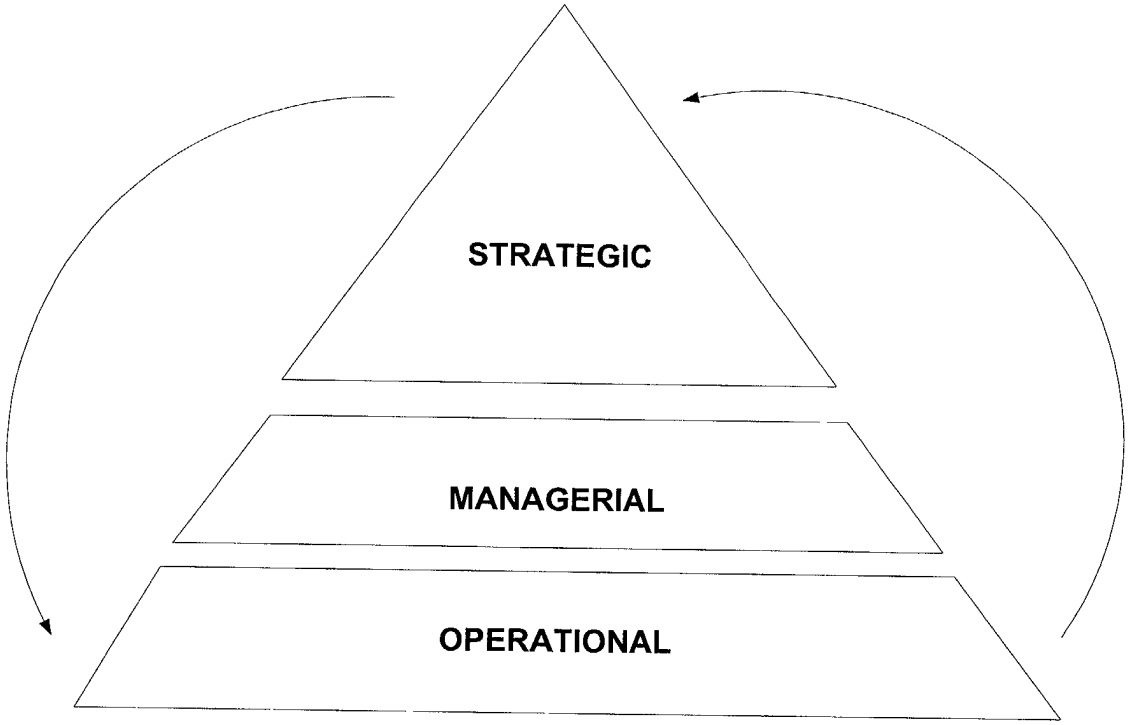



FIG. 5

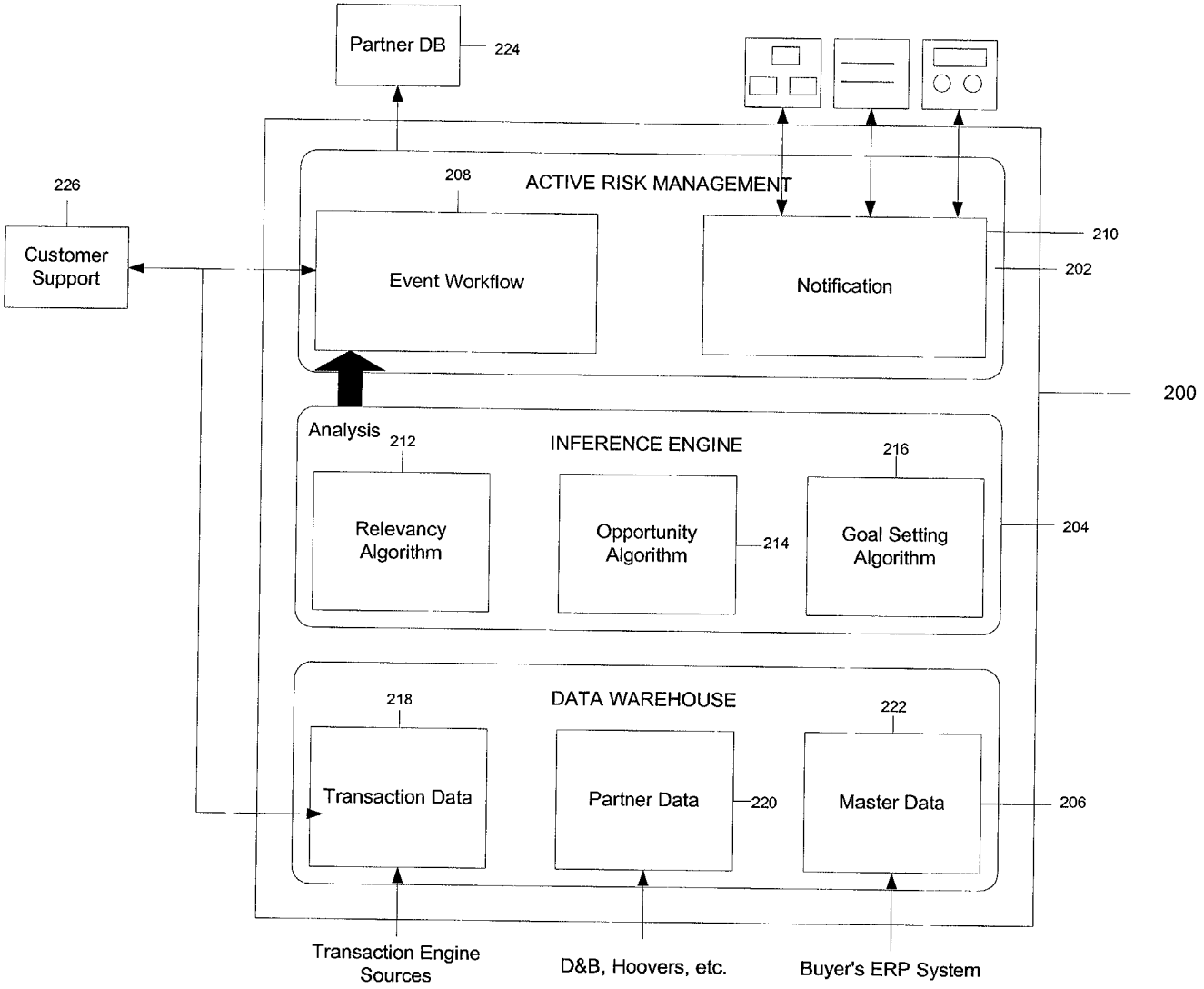

Partner DB
224
226
Customer Support
208
ACTIVE RISK MANAGEMENT
Event Workflow
Notification
210
202
200
Analysis
212
INFERENCE ENGINE
216
Relevancy Algorithm
Opportunity Algorithm
214
Goal Setting Algorithm
204
218
DATA WAREHOUSE
222
Transaction Data
Partner Data
220
Master Data
206
Transaction Engine Sources
D&B, Hoovers, etc.
Buyer's ERP System

Figure 6

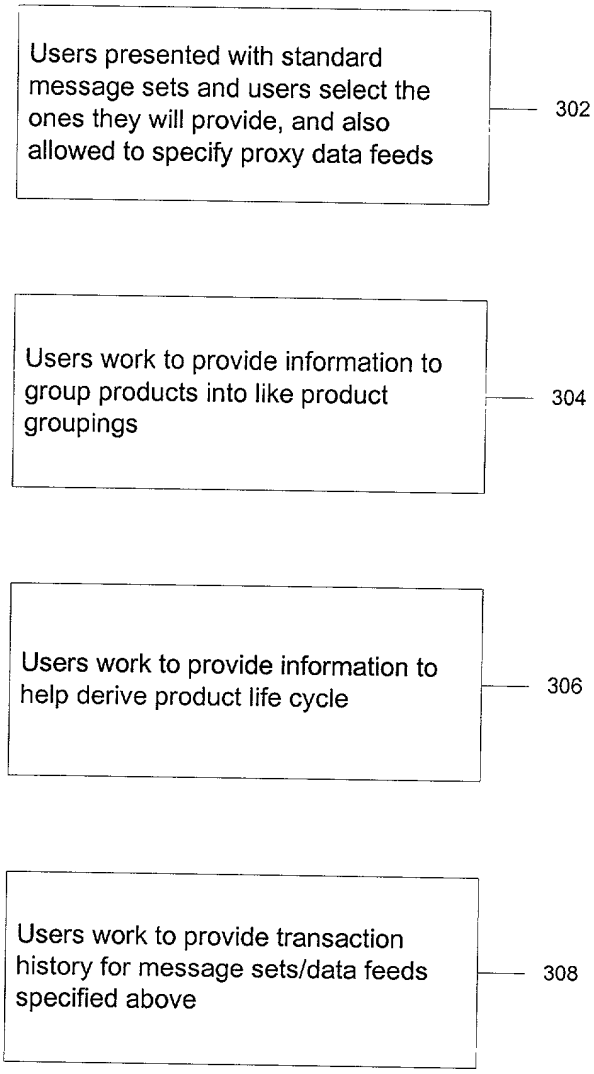

Users presented with standard message sets and users select the ones they will provide, and also allowed to specify proxy data feeds
302
300
Users work to provide information to group products into like product groupings
304
Users work to provide information to help derive product life cycle
306
Users work to provide transaction history for message sets/data feeds specified above
308

Figure 7

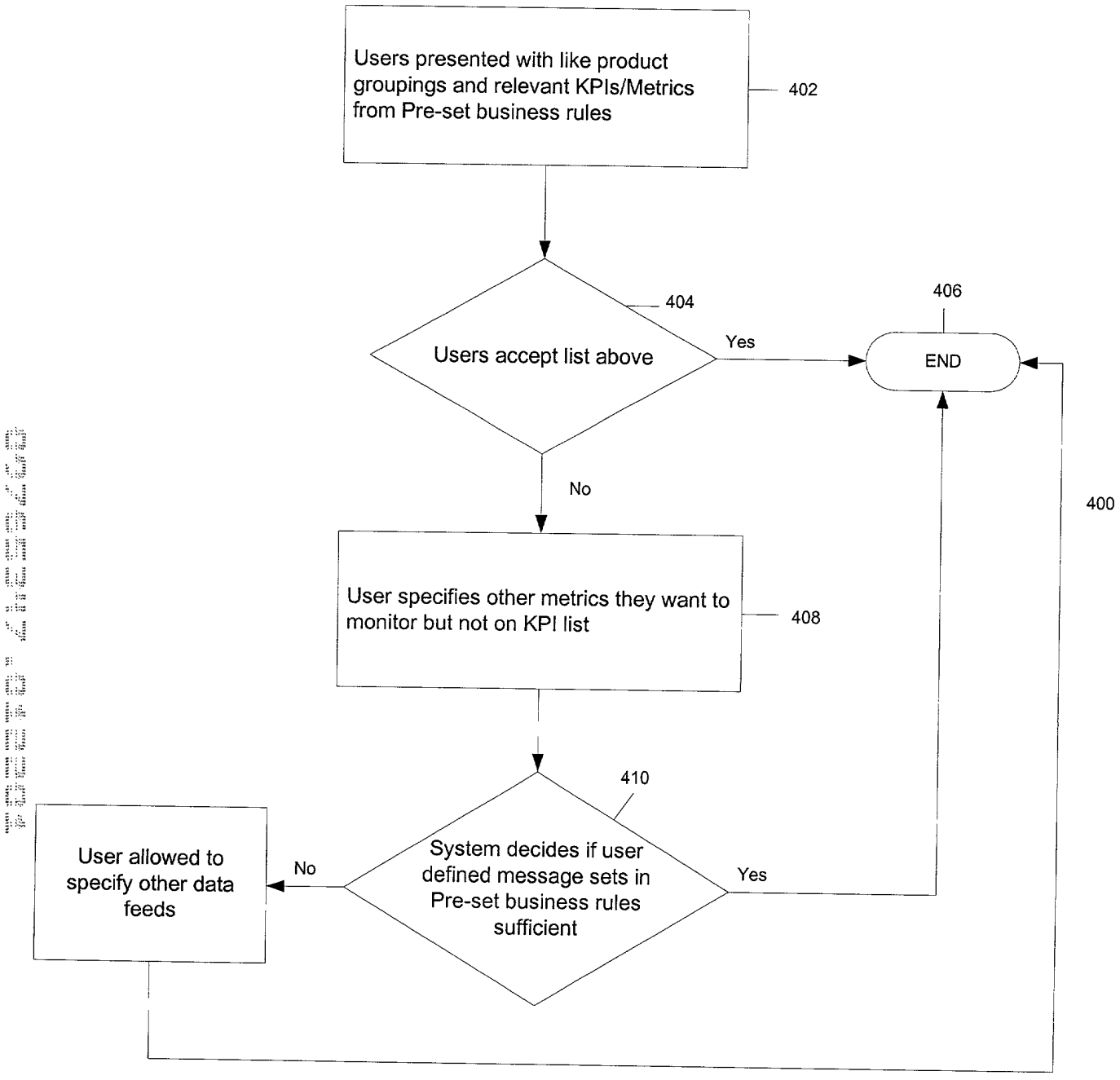

Users presented with like product groupings and relevant KPIs/Metrics from Pre-set business rules
402
Users accept list above
404
Yes
406
END
No
400
User specifies other metrics they want to monitor but not on KPI list
408
410
System decides if user defined message sets in Pre-set business rules sufficient
No
Yes
User allowed to specify other data feeds

Figure 8

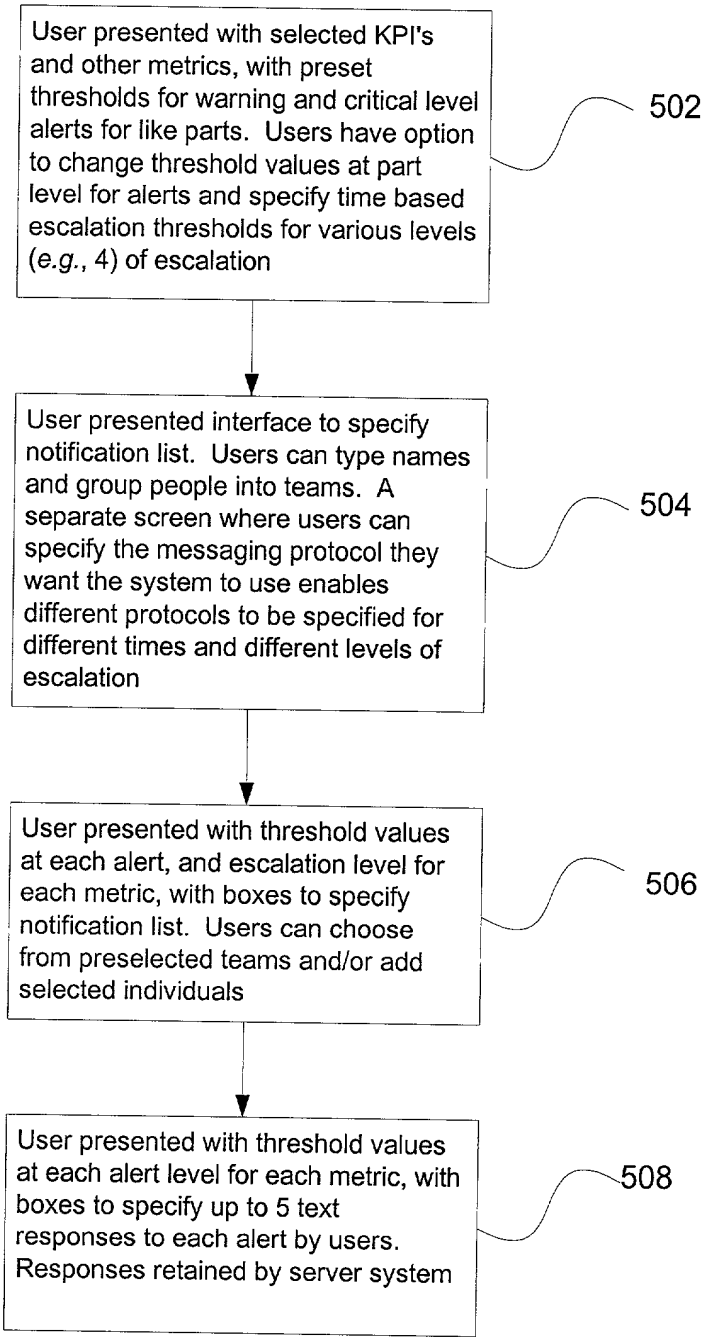

User presented with selected KPI's and other metrics, with preset thresholds for warning and critical level alerts for like parts. Users have option to change threshold values at part level for alerts and specify time based escalation thresholds for various levels (e.g., 4) of escalation
502
User presented interface to specify notification list. Users can type names and group people into teams. A separate screen where users can specify the messaging protocol they want the system to use enables different protocols to be specified for different times and different levels of escalation
504
500
User presented with threshold values at each alert, and escalation level for each metric, with boxes to specify notification list. Users can choose from preselected teams and/or add selected individuals
506
User presented with threshold values at each alert level for each metric, with boxes to specify up to 5 text responses to each alert by users. Responses retained by server system
508

Fig. 9

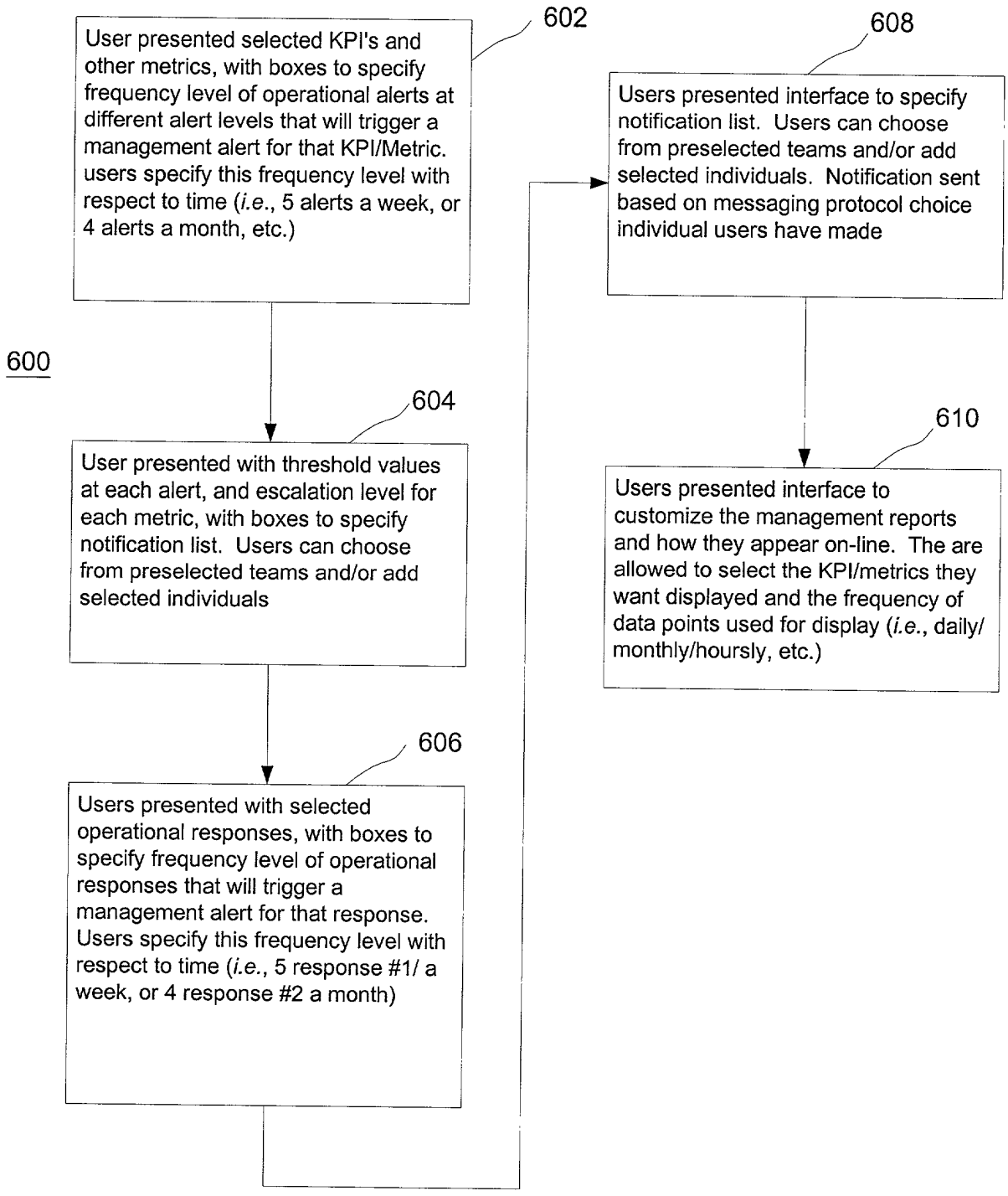

600
602
User presented selected KPI's and other metrics, with boxes to specify frequency level of operational alerts at different alert levels that will trigger a management alert for that KPI/Metric. users specify this frequency level with respect to time (*i.e.*, 5 alerts a week, or 4 alerts a month, etc.)
604
User presented with threshold values at each alert, and escalation level for each metric, with boxes to specify notification list. Users can choose from preselected teams and/or add selected individuals
606
Users presented with selected operational responses, with boxes to specify frequency level of operational responses that will trigger a management alert for that response. Users specify this frequency level with respect to time (*i.e.*, 5 response #1/ a week, or 4 response #2 a month)
608
Users presented interface to specify notification list. Users can choose from preselected teams and/or add selected individuals. Notification sent based on messaging protocol choice individual users have made
610
Users presented interface to customize the management reports and how they appear on-line. The are allowed to select the KPI/metrics they want displayed and the frequency of data points used for display (*i.e.*, daily/ monthly/hoursly, etc.)

Fig. 10

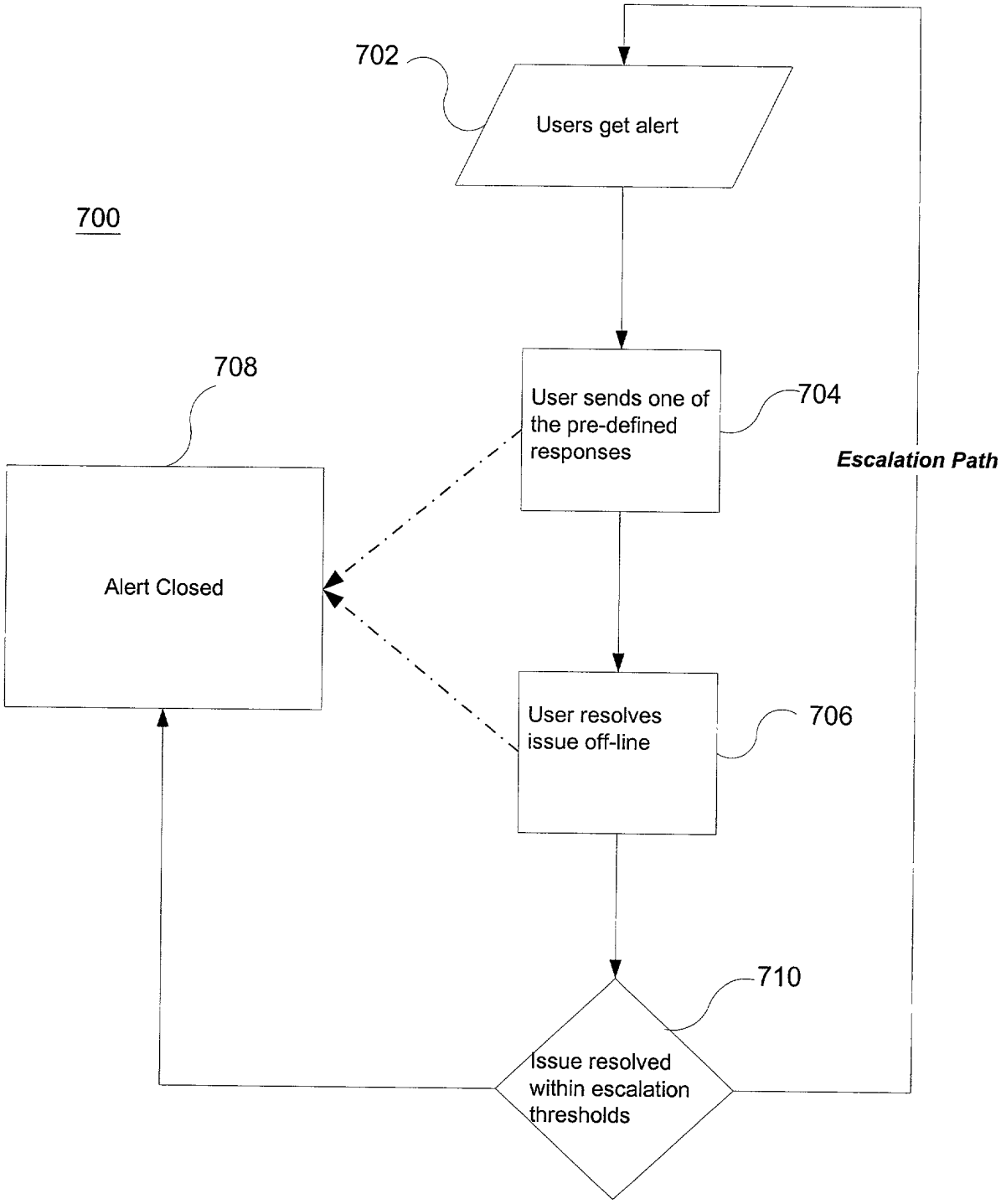

700
702
Users get alert
704
User sends one of the pre-defined responses
706
User resolves issue off-line
708
Alert Closed
710
Issue resolved within escalation thresholds
Escalation Path

Fig. 11

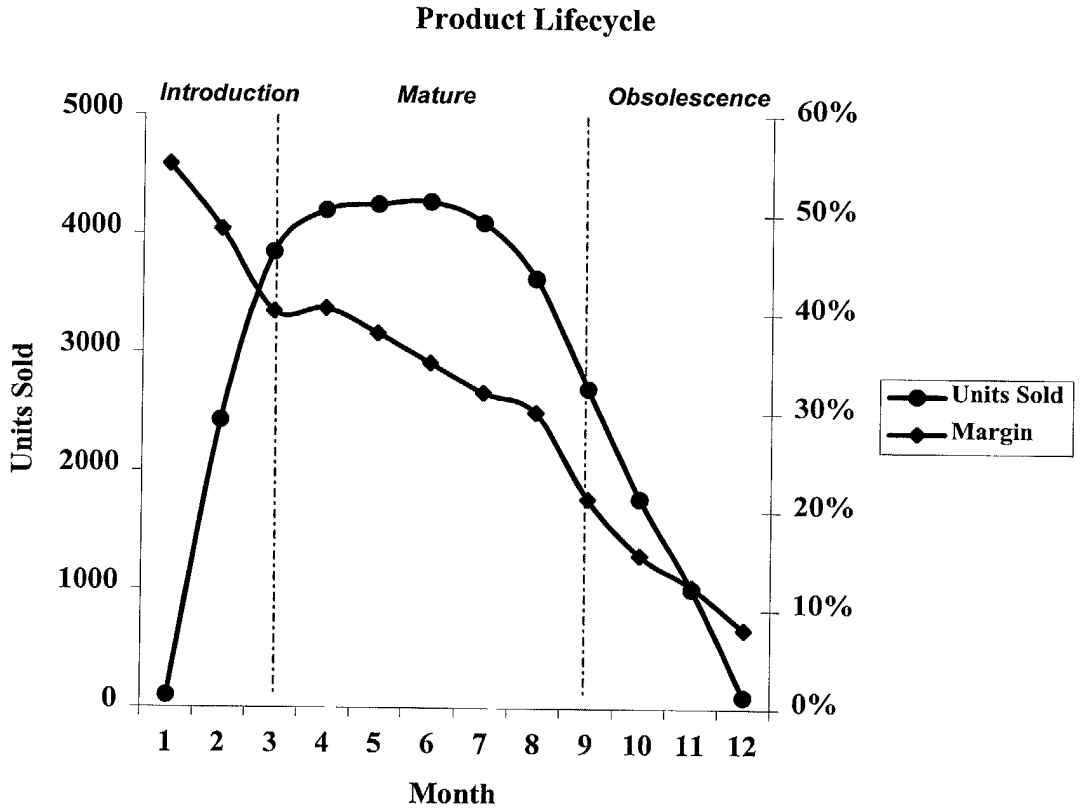

Product Lifecycle
Introduction
Mature
Obsolescence
5000
4000
3000
2000
1000
0
Units Sold
60%
50%
40%
30%
20%
10%
0%
1 2 3 4 5 6 7 8 9 10 11 12
Month
Units Sold
Margin

Fig. 12

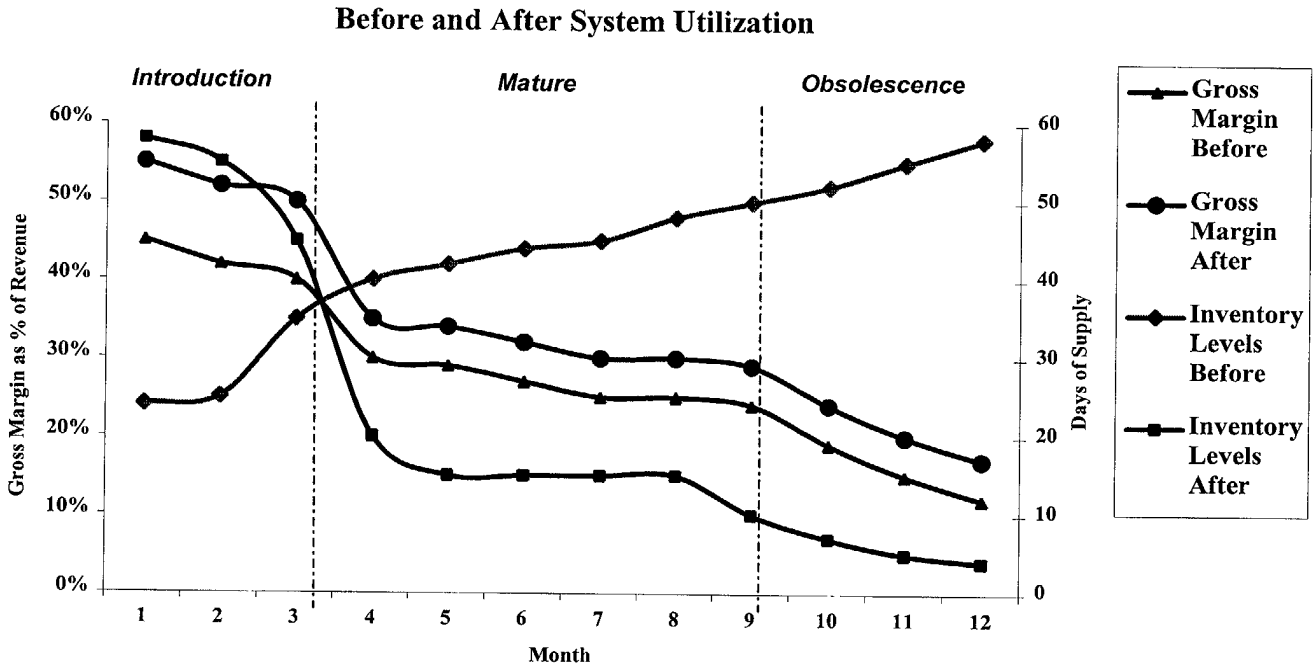

Before and After System Utilization
Introduction
Mature
Obsolescence
60%
50%
40%
30%
20%
10%
0%
Gross Margin as % of Revenue
1
2
3
4
5
6
7
8
9
10
11
12
Month
60
50
40
30
20
10
0
Days of Supply
Gross Margin Before
Gross Margin After
Inventory Levels Before
Inventory Levels After

Fig. 13

| KPI's | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Analytic Packs | Forecast Accuracy | Forecast Variance | Service Level | Days of Supply | Inventory Turns | On-time-ship | On-time-delivery | Perfect Order | Fill Rate | Cash-to-Cash | User Defined/Other Elements |
| Tradeoff service level vs. cost | X | | X | X | | | | | | | Product standard cost |
| Confidence Factor | X | X | | | | | | | | | Product lifecycle |
| Tradeoff customer service levels vs. channel inventory levels | | | | X | | X | X | X | | | Product lifecycle, Product standard cost |
| Rank and manage partner performance | X | X | X | | | X | X | X | X | | Industry benchmarks, User defined composite metrics |
| Tradeoff Cash-to-Cash vs. service level and inventory | | | X | X | | | | | | X | Payment cycle time information |

Fig. 14(a)

| | Details | |
|---|---|---|
| **Analytic Packs** | **Details** | **Input** |
| **Tradeoff service level vs. cost** | Allow users to view tradeoffs between forecast accuracy, level of inventory, cost and service levels. This lets users set policy that optimizes the relationship between these 3 variables, allowing users to set inventory levels that minimizes cost while achieving desired service levels. Also lets users to specify policy based on product lifecycle profiling, allowing different policy to be set for different products with system recommendations around which KPI to optimize based on lifecycle stage (Service level at introduction, Inventory levels at obsolescence) | Historical information around Forecast Accuracy, Inventory levels (DOS), Service levels, Product lifecycle information |
| **Confidence Factors** | Allow users to see the degree of reliability and accuracy of partner and network commitments based on product lifecycle. This lets them make allowances in their goal/threshold setting to take into account a perceived degree of inaccuracy/variance | History of performance for Forecast Accuracy, Forecast Variance, On-time-ship, On-time-delivery, Perfect Order, Fill Rate |
| **Tradeoff customer service levels vs. channel inventory levels** | Allow users to view tradeoffs between customer service levels and levels of inventory taking into account the product lifecycle. Allows users to set goals that achieve desired customer service levels while minimizing amount of inventory that needs to be carried. Also alert users when goals set are not appropriate based on product lifecycle stage | Historical information around On-time-ship, On-time-delivery, Perfect Order, Inventory Levels (DOS), Prod std cost & Product lifecycle information |
| **Rank and manage partner performance** | Allow users to see and compare partner performance across the supply-chain network and also across industry benchmarks | Historical information on partner performance for relevant KPIs (OTS, OTD, Fill Rate, Perfect Order), Information aggregation from other Premonition installations, Data feeds from D&B, Hoovers and other industry databases, User defined composite metrics |
| **confidence Factors** | Allow users to see how changing service levels and inventory levels affects the csh-to-cash cycle time. Allows users to set goals across the other 2 metrics to minimize the cash-to-cash cycle time | Historical information on service levels, inventory levels, & cash-to-cash cycle time |

Fig. 14(b)

| Message Sets | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| KPI's | Forecast (830) | Inventory Report (846) | PO (850) | PO/Ack (855) | Material Release (862) | Invoice (810) | Payment (820) | Advance Ship Notification (856) | Receipt Advice (861) | Analytics |
| Forecast Accuracy | X | X | | | X | | | | | Tradeoff analysis between service levels and cost. Set confidence levels based on past performance and product lifecycle phase. |
| Forecast Variance | X | | | | | | | | | Highlights reliability and predicatibility of forecasting process. Set confidence levels based on product lifecycle phase and past partner performance. |
| Service Level | | X | X | | X | | | | | Tradeoff analysis of lost revenue vs. higher inventory carrying costs. Set smart goals by product based on lifecycle profiling. |
| Days of Supply | X | X | | | X | | | | | Minimize inventory levels when comfortable with forecast variability. Accelerate inventory turns by dynamically adjusting goals based on product lifecycle and past performance of partners. |
| On-time-ship | | | X | X | X | X | | X | | Improve customer satisfaction and retention by actively managing tradeoffs between customer service levels and channel inventory levels. Set aggressive, achievable goals by product based on lifecycle phase. |
| On-time-delivery | | | X | X | X | X | X | | X | Improve customer satisfaction and retention by actively managing tradeoffs between customer service levels and channel inventory levels. Set aggressive, achievable goals by product based on lifecycle phase. |
| Perfect Order | | | X | X | X | X | X | X | X | Actively manage partner service level and effectiveness, to create a superior customer experience. Focus management attention on "hot spots" with Metalert pattern matching technology. |
| Fill Rate | | | X | | X | X | | X | | Actively manage partner service level and effectiveness, to create a superior customer experience. Use to rank and drive partner performance. |

Fig. 14(c)

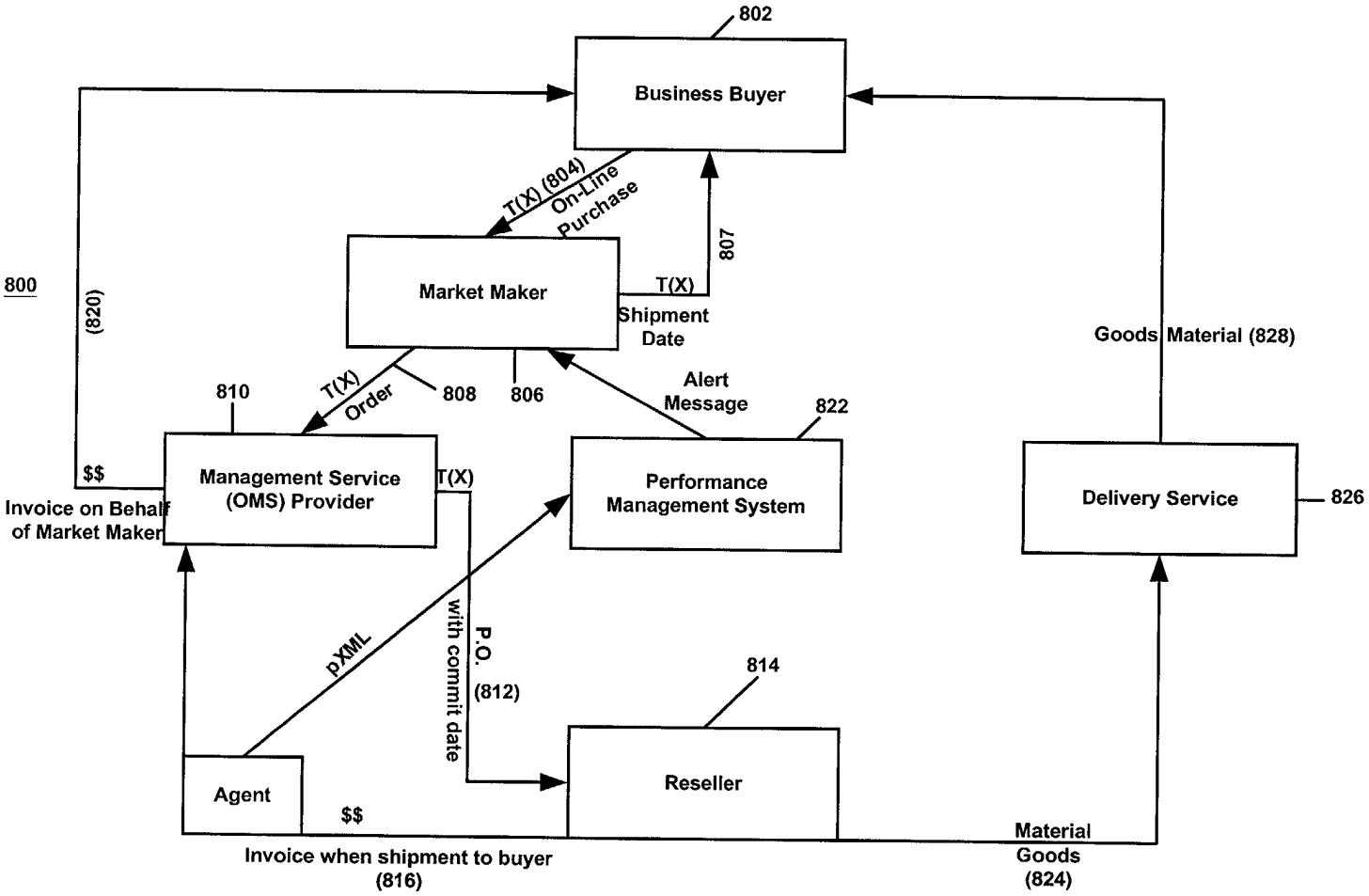

802
Business Buyer
T(X) (804)
On-Line
Purchase
807
800
(820)
Market Maker
T(X)
Shipment
Date
Goods Material (828)
T(X)
Order
808
806
Alert
Message
822
810
$$
Management Service
(OMS) Provider
T(X)
Performance
Management System
Delivery Service
826
Invoice on Behalf
of Market Maker
pXML
with commit date
P.O.
(812)
814
Agent
Reseller
$$
Material
Goods
(824)
Invoice when shipment to buyer
(816)

Figure 15

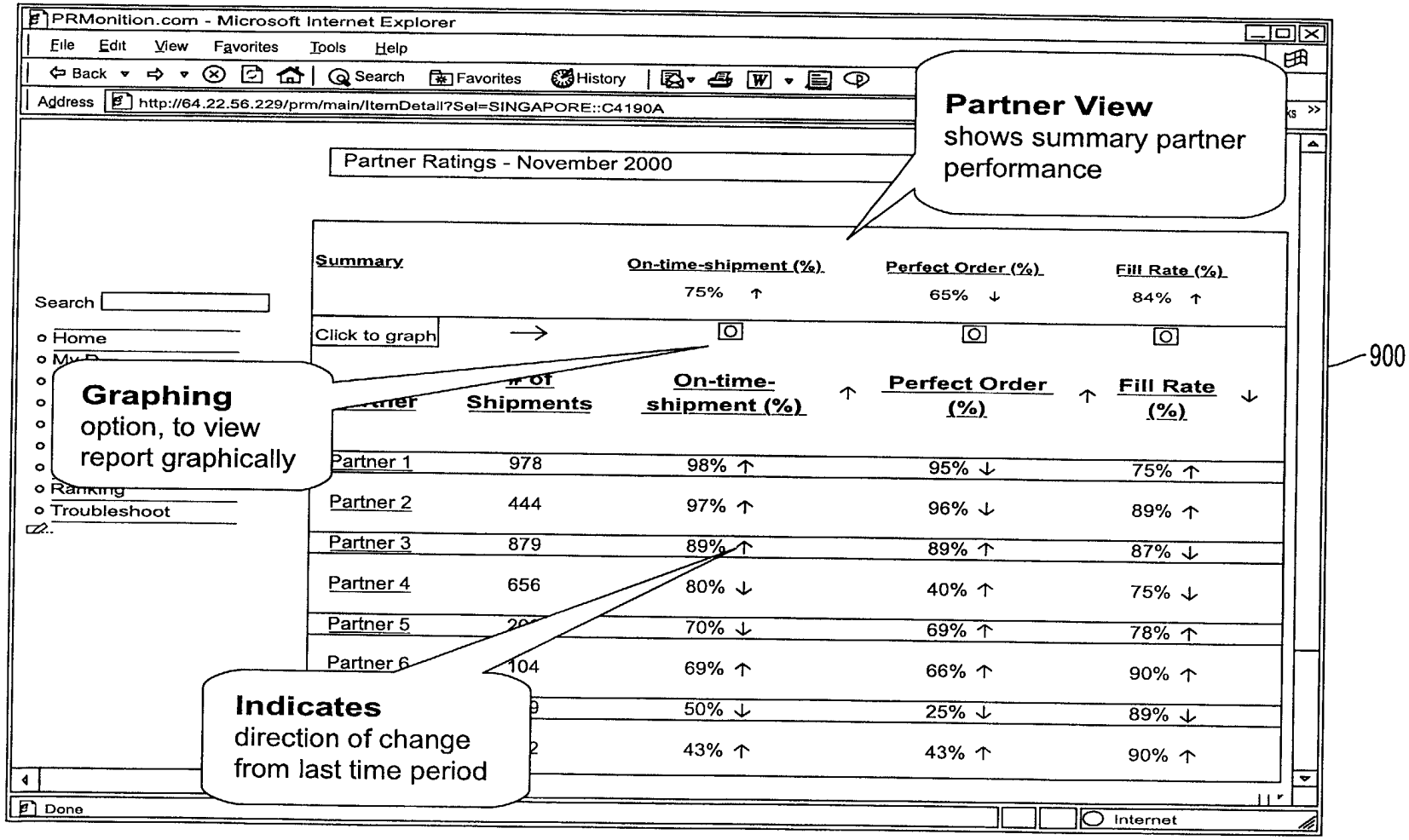

PRMonition.com - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites History
Address http://64.22.56.229/prm/main/ItemDetail?Sel=SINGAPORE::C4190A
Partner Ratings - November 2000
Partner View
shows summary partner performance
Summary
On-time-shipment (%) 75% ↑
Perfect Order (%) 65% ↓
Fill Rate (%) 84% ↑
Click to graph
Search
Home
Ranking
Troubleshoot
Graphing
option, to view report graphically
# of Shipments
On-time-shipment (%)
Perfect Order (%)
Fill Rate (%)
Partner 1 978 98% ↑ 95% ↓ 75% ↑
Partner 2 444 97% ↑ 96% ↓ 89% ↑
Partner 3 879 89% ↑ 89% ↑ 87% ↓
Partner 4 656 80% ↓ 40% ↑ 75% ↓
Partner 5 70% ↓ 69% ↑ 78% ↑
Partner 6 104 69% ↑ 66% ↑ 90% ↑
50% ↓ 25% ↓ 89% ↓
43% ↑ 43% ↑ 90% ↑
Indicates
direction of change from last time period
Done
Internet
900

FIG. 16

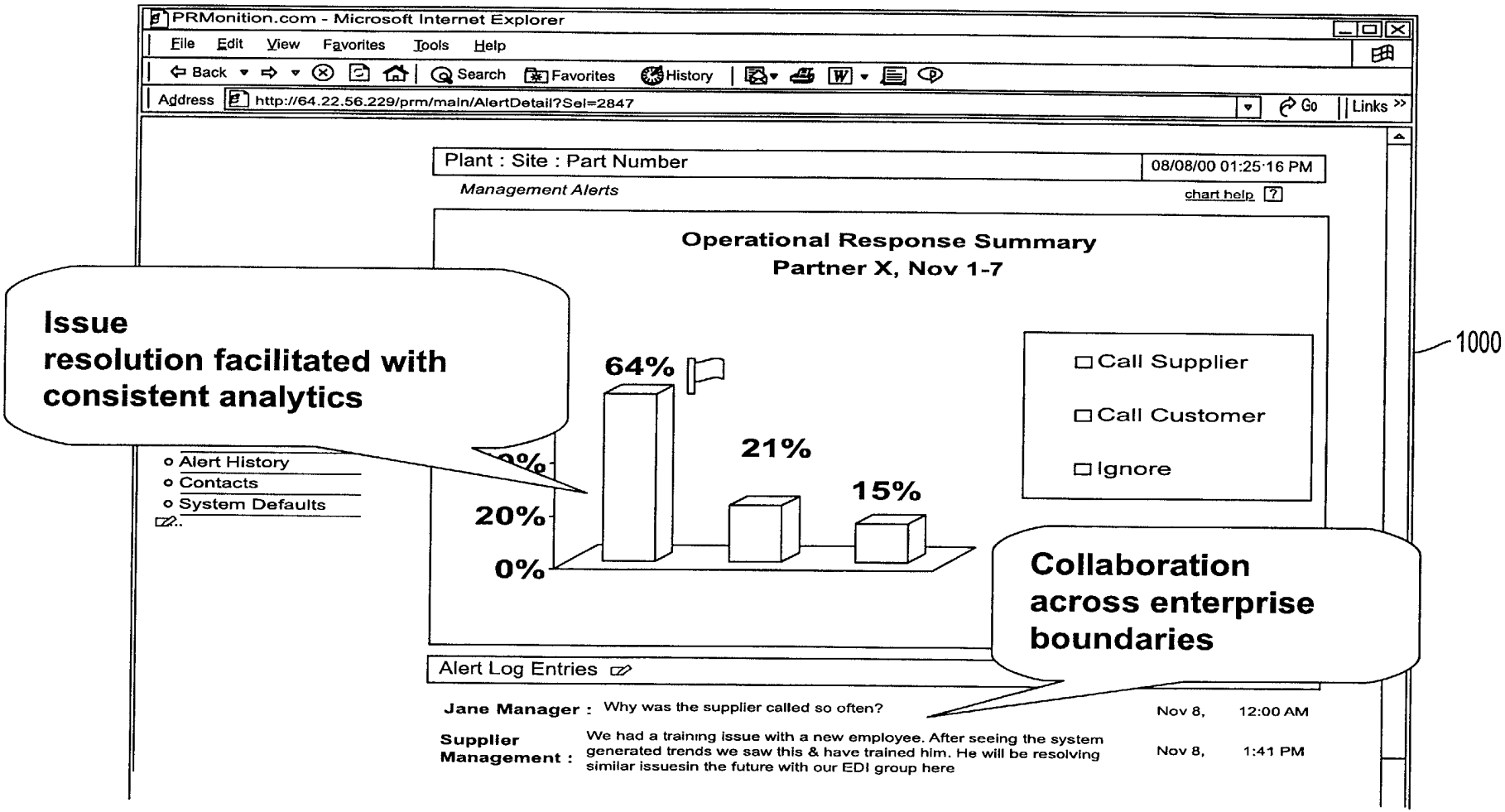

PRMonition.com - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites History
Address http://64.22.56.229/prm/main/AlertDetail?Sel=2847
Go Links
Plant : Site : Part Number
08/08/00 01:25:16 PM
Management Alerts
chart help
Operational Response Summary
Partner X, Nov 1-7
Issue resolution facilitated with consistent analytics
64%
21%
15%
20%
0%
Call Supplier
Call Customer
Ignore
Alert History
Contacts
System Defaults
Collaboration across enterprise boundaries
Alert Log Entries
Jane Manager : Why was the supplier called so often? Nov 8, 12:00 AM
Supplier Management : We had a training issue with a new employee. After seeing the system generated trends we saw this & have trained him. He will be resolving similar issuesin the future with our EDI group here Nov 8, 1:41 PM
1000

FIG. 17

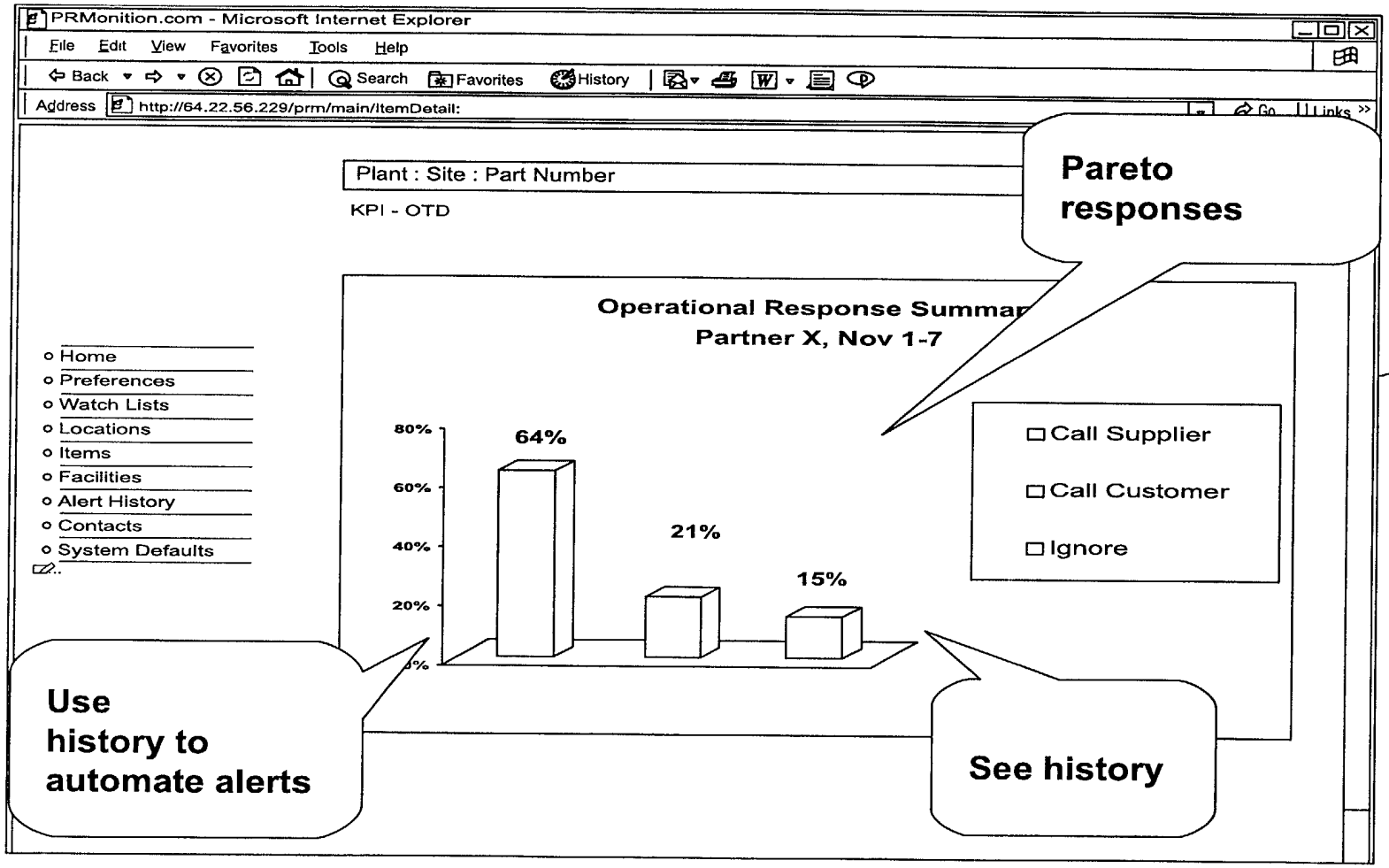
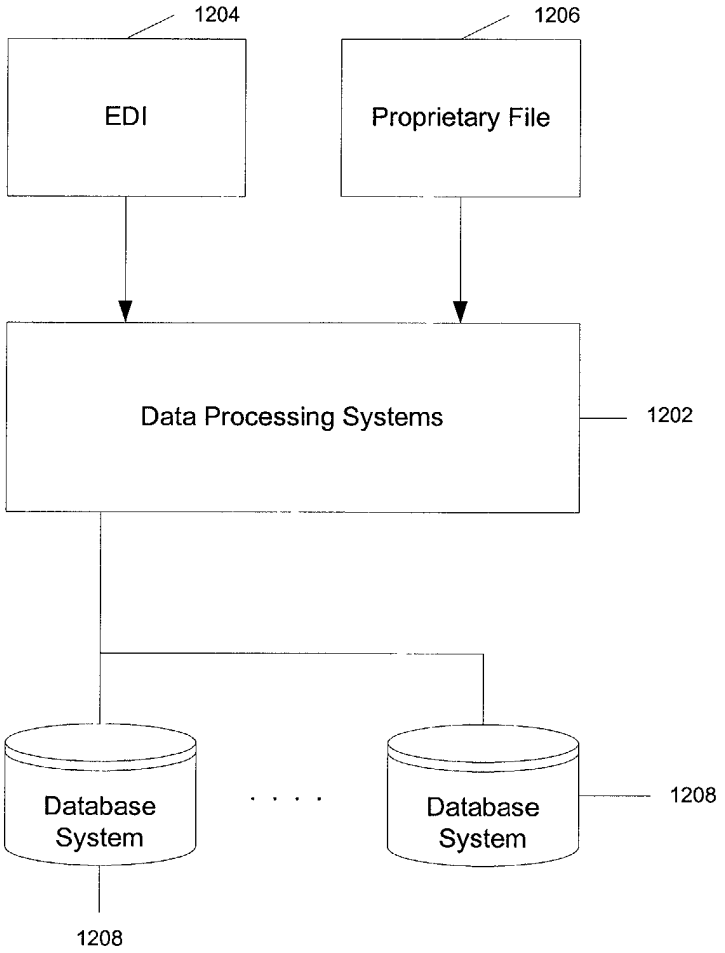
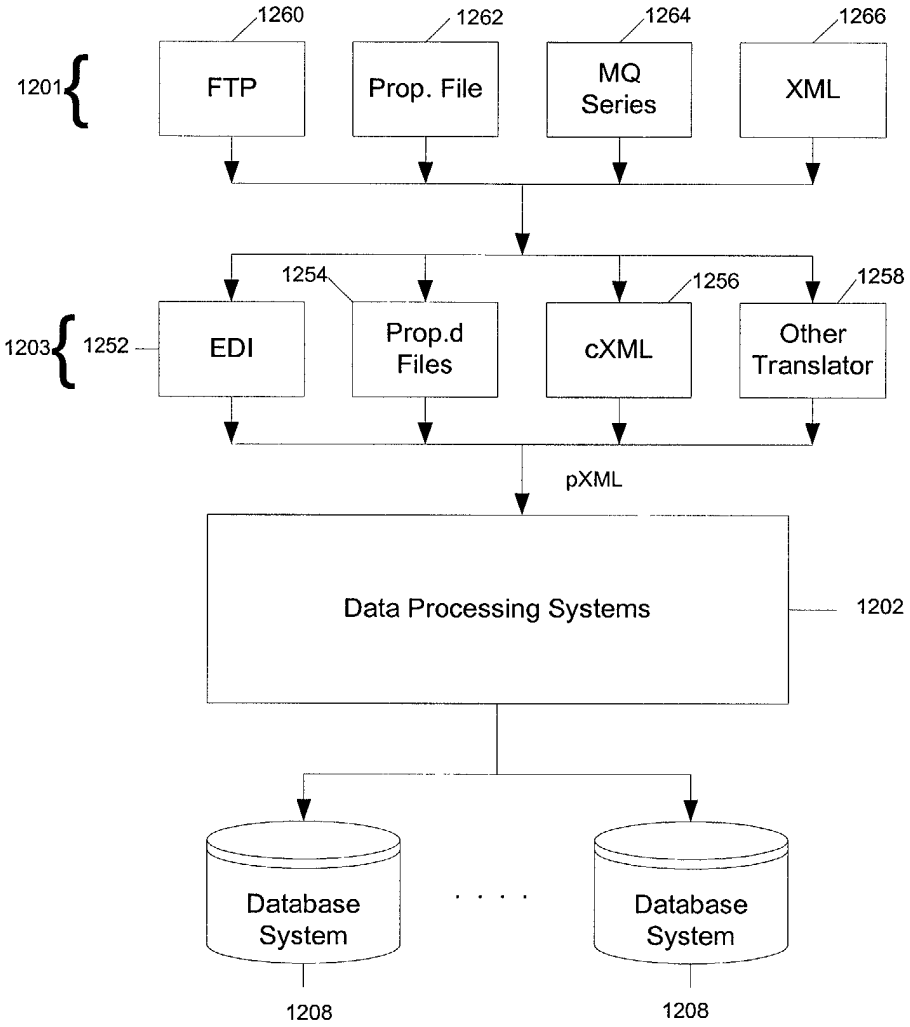

PRMonition.com - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Search Favorites History
Address http://64.22.56.229/prm/main/ItemDetail:
Plant : Site : Part Number
KPI - OTD
Pareto responses
Operational Response Summar
Partner X, Nov 1-7
1100
Home
Preferences
Watch Lists
Locations
Items
Facilities
Alert History
Contacts
System Defaults
80%
60%
40%
20%
64%
21%
15%
Call Supplier
Call Customer
Ignore
Use history to automate alerts
See history

FIG. 18




(a)




(b)

1200

Figure 19

PATENT APPLICATION

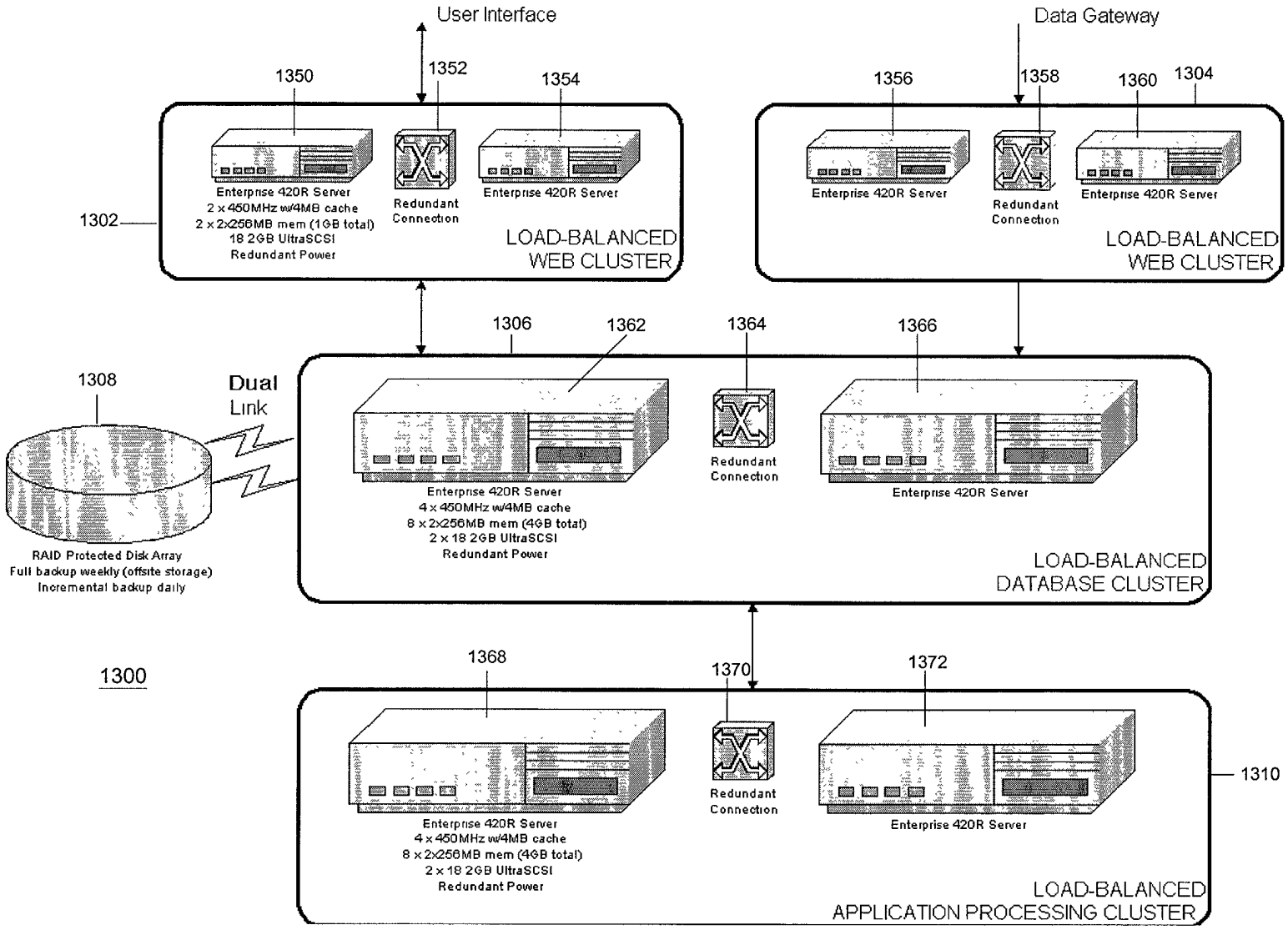



Fig. 20